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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,512	11/30/2000	Teruhiko Imoto	001431	5196

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EXAMINER

MERCADO, JULIAN A

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/701,512

Applicant(s)

IMOTO ET AL.

Examiner

Julian A. Mercado

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4 and 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,4 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 1745

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 2, 2003 has been entered.

Remarks

The rejection of claims 2, 4 and 5 under 35 U.S.C. 103(a) based on Ise et al. (WO97/50135) and Rendina (U.S. Pat. 5,932,372) has been withdrawn in view of the new ground of rejection(s) set forth in this Office Action.

Claim Objections

Claim 2 is objected to because of the following informalities:

- a. In claim 2 at line 11, it is suggested to change "the only the" to --only the--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102 and 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1745

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 5 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ise (U.S. 5,943,545).

Regarding independent claim 2 and dependent claims therefrom as further noted, Ise teaches a method of producing a hydrogen absorbing alloy for an alkaline battery, wherein a first step of obtaining particles represented by the formula $MmNi_{3.4}Co_{0.8}Al_{0.2}Mn_{0.6}$. (col. 4 line 23) In this formula, M is specifically disclosed as Al, the subscript “x” in being present at 3.4 satisfies the instant $3.0 \leq x \leq 5.2$, the subscript “y” in being present at 0.8 satisfies the instant $0 \leq y \leq 1.2$, and the subscript “z” in being present at 0.6 satisfies the instant $0.1 \leq z \leq 0.9$, therefore, the sum of x, y and z at 4.8 satisfies the instant $4.4 \leq x + y + z \leq 5.4$.

As to “the hydrogen absorbing alloy having a sintered surface region and a bulk region covered with the surface region” and subsequent limitations as recited in claim 2, lines 19-25, these limitations have not been given patentable weight, as the product limitations fail to further limit and give breadth and scope to the method claim. Of note, however, Ise similarly teaches that the surface of the alloy is coated with a metal such as nickel, Ni, or cobalt, Co. (col. 3 line

Art Unit: 1745

11-15) To this extent, both a nickel compound such as nickel hydroxide and a cobalt compound such as cobalt hydroxide are added to a hydrochloric acid solution such that the initial pH thereof is in the range of 0.7 to 2.0, e.g. a pH of 1 or 2. (col. 4 line 45-61, applies to dependent claim 5)

While Ise does not explicitly teach a third step of sintering, the patentees teach a heat-treatment step of the acid-treated alloy in a hydrogen atmosphere. (col. 4 line 40-43)

It has been established in the prosecution of this case that “sintering” is a subset of “heat-treating” to the extent that sintering is a heat-treatment step below the melting point of the material being treated. In Ise, the heat-treatment step is specifically disclosed at 800°C which is notably and comfortably lower than the melting point of the hydrogen-absorbing alloy (1180°C to 1250°C) disclosed and claimed by applicant.

As to the Mn contained in the hydrogen absorbing alloy moving to the surface thereof, it would naturally flow for the Mn in Ise to inherently move to the surface of the hydrogen absorbing alloy as claimed, absent of a showing by applicant that the claimed invention distinguishes over the reference. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) and *In re Spada*, 15 USPQ 2d 1655 (Fed. Cir. 1990) The examiner notes that applicant’s disclosure states that when the particles of the hydrogen absorbing alloy are treated in the acid solution and then heat-treated and sintered at a temperature of not more than the melting point of the particles, “an oxide on the surface of each of the particles of the hydrogen absorbing alloy is reduced, and manganese Mn contained in the particle of the hydrogen absorbing alloy is moved to the surface of the particle of the hydrogen absorbing alloy”. (specification, pg. 11) That is, it appears to the examiner that the Mn moving to the surface of the hydrogen absorbing alloy is an effect of the acid and heat-treatment steps. To this extent, not only does Ise teach an acid and heat-treatment

Art Unit: 1745

step of the hydrogen absorbing or hydrogen storage alloy, Ise also teach the additional effect disclosed by applicant of oxides on the surface of the particles being reduced, "the hydrogen-absorbing alloy is heat-treated in an atmosphere with the presence of hydrogen after the application of the acid treatment, so that hydroxides are reduced to the state of a metal". (col. 3 line 11-14)

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ise.

Regarding claim 4, as to the amount of nickel or cobalt in the acid solution in the range of 0.3% to 5.0% by weight of the hydrogen storage alloy, absent of unexpected results it is asserted that the amount of nickel or cobalt in solution is an optimizable parameter for a result-effective variable. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) The amount of the metals is considered result-effective in that it directly affects the degree of coating of the respective metals on the alloy surface. (col. 3 line 11-16)

Response to Arguments

Applicant's arguments with respect to Ise et al. (WO97/50135) and Rendina (U.S. Pat. 5,932,372) have been considered but are moot in view of the new ground(s) of rejection.

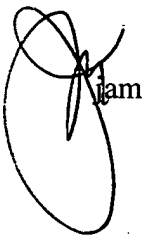
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian A. Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.


Art Unit: 1745

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



lam



STEPHEN W. J. JY
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GROUP 1700